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EXAMINER				
ZHEN, LI B				
ART UNIT		PAPER NUMBER		
2194				
NOTIFICATION DATE		DELIVERY MODE		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Office Action Summary

Application No.

09/927,957

Applicant(s)

WISEMAN ET AL.

Examiner

Li B. Zhen

Art Unit

2194

Period for Reply
-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-24, 26-29, 31, 32, 34, 38-45, 47-50, 52, 53 and 58-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-24, 26-29, 31, 32 and 34 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5-7, 10-17, 38-45, 47-50, 52, 53, 58 and 62 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 9 and 59-61 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Final Drawing (PTO-846)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1 – 7, 9 – 24, 26 – 29, 31, 32, 34, 38 – 45, 47 – 50, 52, 53 and 58 – 62 are pending in the application.

Response to Arguments

2. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

3. Claims 18 – 24, 26 – 29, 31, 32 and 34 are allowed.
4. Claims 3, 4, 9 and 59 – 61 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Specification

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: the specification lacks antecedent basis for "machine-readable medium".

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claims 38 – 45, 47 and 48 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 38 – 45, 47 and 48 recite a “machine-readable medium” and the specification fails to provide antecedent bases for this limitation [see objection to the specification above]. Without antecedent basis for “machine-readable medium”, it is unclear if the limitation intended to be the same as the storage media described as part of the disclosed program product or whether it's intended to be broader than the disclosed storage media. In addition, applicant's representative (p. 11 of response submitted 09/02/2005) specifically does not intend to concede that a propagated signal carrying information indicative of instructions is in any way intangible. Therefore, it is believed that the limitation “machine-readable medium” is intended to claim something broader than the disclosed storage media and cover signals, waves and other forms of transmission media, that carry instructions. Therefore, the limitation “machine-readable medium” is not limited to physical articles or objects which constitute a manufacture within the meaning of 35 USC 101 and enable any functionality of the instructions carried thereby to act as a computer component and realize their functionality. As such, the claim is not limited to statutory subject matter and is therefore non-statutory.

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8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. **Claims 1, 2, 5 – 7, 10 – 17, 49, 50, 52, 53, 58 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,721,779 to Maffei [previously cited] in view of U.S. Patent No. 6,738,975 to Yee et al. [previously cited], and further in view of U.S. Patent Application Publication No. 2006/0059107 to Elmore et al. [hereinafter Elmore].**

11. As to claim 1, Maffei teaches the invention substantially as claimed including a method of exchanging information among applications [a system for the delivery of data between applications; col. 1, line 55 – col. 2, line 10], the method comprising:

providing a plurality of transformers [protocol adapter 2a, 2a', 2a" at the client side and received by a protocol adapter 1a, 1b, 1c, 1d, 1e, 1f or 1g at the proxy side; col. 4, line 63 – col. 5, line 6], each transformer corresponding to a unique format [protocol adapters encapsulate at least one logic needed to: Interface with a transport protocol, such as HTTP, WAP or GSM Data; col. 4, lines 26 – 32];

using a first transformer to transmit a data object in a common format [protocol adapters allow the message proxy to send and receive messages to and from message clients using arbitrary wireless protocols; col. 3, lines 4 – 23];

publishing the common format data object to a communication channel [client sends to the proxy only the JMS message and the code information related with the topic; col. 3, line 47 – col. 4, line 3], the channel [topic; col. 3, lines 47 – col. 4, line 4] being selected on the basis of the data object [a topic T can, depending on the application, denote a stream of stock quotes, of sports news, or denote a transmission channel; col. 5, line 36 – 50];

subscribing to the communication channel to retrieve the published common format data object [When a JMS message is received on a topic or queue the proxy 1 is subscribed to on behalf of the client, the proxy creates a message token containing the data of the JMS message. The message token is then sent to the client 2 using wireless communication; col. 5, lines 13 – 21]; and

using a second transformer to send the data object to a second application [For that the token is sent via a protocol adapter 1a, 1b, 1c, 1d, 1e, 1f or 1g at the proxy side, and received by the protocol adapter 2a, 2a', 2a" at the client side; col. 5, lines 13 – 21].

Although Maffei discloses the use of transformers [protocol adapters] to allow a message proxy to send and receive messages to and from message clients using arbitrary wireless protocols [col. 3, lines 5 – 22], Maffei does not disclose a first transformer to transform a data object from a format understandable by a first application into a common format data object, and a second transformer to transform the common format data object into a format understandable by a second application.

However, Yee teaches an enterprise messaging service implemented using the Java Messaging Service that enables system to use multiple message modes and supports message hubs and message persistence [col. 7, lines 60 – 65], a method of exchanging information among applications [an integration server 170, including an enterprise messaging engine 180; col. 15, lines 20 – 32], determining an event type associated with the common format data object [col. 18, lines 47 – 62], a plurality of transformers [intelligent agent-adaptor; col. 16, lines 54 – 65], each transformer corresponding to a unique transformation from one format into another [A message definition 613 not only identifies the kind of system message that the object 600 is to handle, but it also defines the hierarchical structure or schema of that system message; col. 18, lines 30 – 39], a first transformer [message definition 613 for a source adapter 622 must include instructions for creating Java types from the application data; col. 18, lines 47 – 62] to transform a data object from a format understandable by a first application [application" data] into a common format data object [Java types], and a second transformer [message definition 613 for a target adapter 623 must include instructions for creating application data from the system Java objects; col. 18, lines 47

– 62] to transform the published common format data object [Java objects] into a format understandable by a second application [application data].

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the invention of Maffeis to incorporate the features of Yee because this facilitates an ability to seamlessly accommodate changes to existing APIs, continues to enable the use of those existing APIs with legacy systems [col. 16, line 65 – col. 17, line 17 of Yee] and enables perfectly seamless negotiation of incremental changes to the application resource 300 into the integration environment [col. 17, lines 5 – 23 of Yee].

Maffeis and Yee do not teach determining a business event type for the common format data object, the business event type representing one or more of a type of function and activity performed by a business, selecting from among multiple communication channels defined in an integration hub, publishing the common format data object to the selected communication channel that is defined in the integration hub to correspond to the single business event type determined for the common format data object, and prioritizing communication of the published common format data object on the selected communication channel.

However, Elmore teaches a eBusiness support system [paragraph 0035], selecting from among multiple communication channels [Examples of these CMI types include credit card validation, address validation, and service reservation, etc; paragraph 0065] defined in an integration hub [paragraph 0037], a communication channel corresponding to the determined business event type [paragraph 1251], each

of the multiple communication channels defined in the integration hub corresponding to a single business event type and being configured to communicate those common format data objects in the integration hub that correspond to the single business event type [paragraphs 1258 – 1265]; publishing the common format data object to the selected communication channel [paragraph 1264] that is defined in the integration hub to correspond to the single business event type determined for the common format data object [paragraph 1250] and configured to communicate those common format data objects in the integration hub that correspond to the single business event type determined for the common format data object [paragraph 1251], and prioritizing communication of the published common format data object on the selected communication channel based on a relative priority associated with the selected communication channel [paragraph 0300], and subscribing to the selected communication channel [paragraph 1269].

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to further modify the system of Maffei and Yee to include the features of Elmore. One of ordinary skill in the art would have been motivated to make the combination because this provides a comprehensive, modular solution that brings eBusiness to communications service providers [paragraph 0004 of Elmore].

12. As to claim 2, Maffei as modified teaches the data object corresponds to one or more of a plurality of business events [col. 16, lines 54 – 65 of Yee].

13. As to claim 5, Maffeis as modified teaches using a first transformer to transform the data object from the format understandable by the first application into the common format data object [col. 18, lines 47 – 62 of Yee] is performed in response to a recognition of a business event by the first application [col. 16, lines 54 – 65 of Yee].

14. As to claim 6, Maffeis as modified teaches that the method is performed in accordance with a plurality of process models that collectively define when information is to be exchanged among applications [executing integration flows to process events; col. 16, lines 1 – 15 of Yee].

15. As to claim 7, Maffeis as modified teaches publishing the common data format object to a communications channel is performed by a source connector and subscribing to the communication channel is performed by a target connector [Transformers 629 can be targets, requesters, and sources; col. 23, lines 35 – 44 and col. 21, line 48 – col. 22, line 7 of Yee].

16. As to claim 10, Maffeis as modified teaches information is exchanged among business support systems or operational support systems or a combination thereof [col. 13, line 58 – col. 14, line 11 of Yee].

17. As to claim 11, Maffeis teaches at least one of the transformers comprises a class defined in an object-oriented programming language [protocol object; col. 3, lines 5 – 23].

18. As to claim 12, Maffeis as modified teaches a controller [col. 20, lines 37 – 46 of Yee] that is configured to route data objects to an associated transformer [col. 29, lines 50 – 63 of Yee].

19. As to claim 13, Maffeis as modified teaches routing a data object to the first transformer using a first controller [col. 29, lines 50 – 63 of Yee].

20. As to claim 14, Maffeis as modified teaches routing the common format data object to the second transformer using a second controller [col. 20, lines 37 – 46 and col. 29, lines 50 – 63 of Yee].

21. As to claim 15, Maffeis as modified teaches at least one of the controllers comprises a class defined in an object-oriented programming language [col. 15, lines 40 – 55 of Yee].

22. As to claim 16, Maffeis as modified teaches an acknowledgement class to exchange status messages among applications ["Adapter Requestor" class; col. 28, line 60 – col. 29, line 10 of Yee].

23. As to claim 17, Maffeis as modified teaches using the acknowledgement class to perform exception handling [col. 7, lines 2 – 11 of Yee].

24. As to claim 49, Maffeis as modified teaches wherein prioritizing communication of the published common format data object on the selected communication channel based on a relative priority associated with the selected communication channel comprises prioritizing communication of the published common format data object on the selected communication channel based on a relative priority of the selected communication channel with respect to other communication channels included in the multiple communication channels [paragraph 0300 of Elmore].

25. As to claim 50, Maffeis as modified teaches the common format data object corresponds to a business event, and prioritizing communication of the published common format data object on the selected communication channel based on a relative priority associated with the selected communication channel comprises prioritizing communication of the published common format data object on the selected communication channel to ensure business events are sent to applications in a correct order [paragraph 0300 of Elmore].

26. As to claim 52, Maffeis as modified teaches the multiple communication channels are prioritized to ensure that business events are sent to applications in a correct order [paragraph 0347 of Elmore].

27. As to claim 53, Maffeis as modified teaches publishing an acknowledgement message to an acknowledgement communication channel assigned to communicate acknowledgement messages [col. 28, line 60 – col. 29, line 10 of Yee], the acknowledgement channel being different than the selected communication channel and the acknowledgement message indicating success or failure of communication of information included in the common format data object to the second application [paragraph 0787 of Elmore].

28. As to claim 58, Maffeis as modified teaches each of the multiple communication channels defined in the integration hub are incapable of properly communicating common format data objects of business event types that are different than the single business event type to which the communication channel corresponds [paragraph 1251 of Elmore].

29. As to claim 62, Maffeis as modified teaches the multiple communication channels defined in the integration hub represent logical partitions of data communication internal to the integration hub [paragraph 0515 of Elmore].

CONTACT INFORMATION

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li B. Zhen whose telephone number is (571) 272-3768. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571)272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Li B. Zhen
Primary Examiner
Art Unit 2194

/Li B. Zhen/
Primary Examiner, Art Unit 2194